REMARKS

This application has been reviewed in light of the Office Action dated

December 5, 2003. Claims 1-19, 21-23, and 25-32 are presented for examination, of which

Claims 1, 9, 18, and 22 are in independent form. Claims 20 and 24 have been canceled,

without prejudice or disclaimer of subject matter, and will not be mentioned further.

Claims 18 and 22 have been amended to define still more clearly what Applicants regard as

their invention, and Claims 1-17, 19, 21, 23, and 25-32 have been amended as to matters of

form not affecting their scope or allowability. Favorable reconsideration is requested.

Applicants note with appreciation the allowance of Claims 1-17, 26-29, and

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Claims 18, 19, 21-23, 25, 30, and 32 were rejected under 35 U.S.C. § 103(a)

as being unpatentable over U.S. Patent No. 5,867,598 (*de Queiroz*), in view of U.S. Patent

No. 6,459,816 (*Matsuura et al.*).

As shown above, Applicants have amended independent Claims 18 and 22

in terms that more clearly define what they regard as their invention. Applicants submit

that these amended independent claims, together with the remaining claims dependent

thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 18 is an image

processing method which is implemented in an image acquisition apparatus. The method

includes the steps of generating image data representing an image, wavelet-transforming

the image data, quantizing the transformed data, and entropically encoding the quantized

data. The method also includes identifying a correct orientation of the image represented

by the image data, from among four possible orientations, as a function of the position of

the image acquisition apparatus, and applying a geometric transformation to the

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transformed data in accordance with the result of the identification.

Among other important features of Claim 18 is identifying a correct orientation of the image represented by the image data, from among four possible orientations, as a function of the position of the image acquisition apparatus.

De Queiroz relates to the processing of compressed digital images, and more particularly to accomplishing the rotation, mirroring, or transposition of a JPEG compressed image so as to reduce the memory requirements for processing the image. *De Queiroz* discusses applying a geometrical transform in a JPEG compressed domain, where a Discrete Cosine Transform (DCT) is used. In the *de Queiroz* method, to avoid the decompression of the image before processing and the re-compression after processing, processing of MxM blocks of the image is accomplished with a JPEG compressed image (column 2, lines 32-34). The *de Queiroz* method contemplates five processings - (a) Rotate 90°, (b) Rotate -90°, (c) Rotate 180°, (d) vertical mirror, and (e) horizontal mirror. *De Queiroz* also discusses a sign change operation for the rows and/or columns of coefficients in each block (column 10, lines 20-61), and how to move the various blocks of an image with respect to one another so as not only to have rotated pixels within a block but also to change the relative position of the blocks themselves (column 10, lines 62-67).

In treating inter-block rotation, *de Queiroz* discusses several processes, and in particular, addresses individual blocks within a coded image once the sizes of the blocks are known. The size of a block can be stored in the header of a JPEG compressed image file (column 11, lines 1-15). As such, the header, added for addressing individual blocks, is used only to process the blocks of the image and to move them with respect to one another. However, the header is not used to identify a correct orientation of the image.

Applicants have found nothing in *de Queiroz* that would teach or suggest

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identifying a correct orientation of the image represented by the image data, from among four possible orientations, as a function of the position of the image acquisition apparatus, as recited in Claim 18.

Matsuura et al. is not seen to overcome the deficiency of *de Queiroz*. The Office Action cites *Matsuura et al.* as disclosing wavelet transformation. However, nothing has been found in *Matsuura et al.* that would teach or suggest identifying a correct orientation of the image represented by the image data, from among four possible orientations, as a function of the position of the image acquisition apparatus, as recited in Claim 18.

Accordingly, Applicants submit that, even if it were permissible to combine *de Queiroz* and *Matsuura et al.*, the resulting combination would not teach all the features of Claim 18.

For at least the foregoing reasons, Applicants submit that Claim 18 is clearly patentable over the cited prior art.
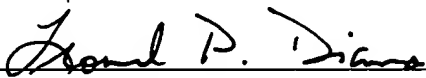
Independent Claim 22 is an apparatus claim corresponding to method Claim 18, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 18.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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